

Our Reference: 200300677-1

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellants:	Xiaohe Chen, et al.
Serial Number:	10/775,660
Filing Date:	February 9, 2004
Confirmation No.:	1438
Examiner/Group Art Unit:	Patrick Dennis Niland/1796
Title:	INK COMPOSITIONS FOR INKJET PRINTING

**REPLY BRIEF**

Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please enter the following Reply Brief in response to the Examiner's answer dated July 8, 2010.

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I. STATUS OF CLAIMS

Claims 1-25 are the claims on appeal.

Claims 1-25 are rejected.

## II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1) Whether claims 1-10 and 13-25 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Yeh, et al. (U.S. Patent Publication No. 2004/0035319, referred to herein as “Yeh”) and Waki, et al. (WO 03/097753 as interpreted by U.S. Patent Publication No. 2004/0242726, referred to herein as “Waki”).

2) Whether claims 11 and 12 are unpatentable under 35 U.S.C. § 103(a) as being obvious in view of Yeh, Waki, and Lu, et al. (U.S. Patent No. 6,102,998, referred to herein as “Lu”).

### III. ARGUMENTS

The arguments presented hereinbelow address the Office's arguments presented in the Examiner's Answer dated July 8, 2010 (referred to herein as the "Answer"). It is submitted, however, that the absence of a reply to a specific rejection, issue, comment, or argument in the Answer does not signify agreement with or concession of that rejection, issue, comment, or argument. Finally, nothing in the following arguments of this reply brief should be construed as an intent to concede any issue with regard to any claim, except as specifically stated below.

#### **A. Rejection of claims 1-10 and 13-25 under 35 U.S.C. § 103(a) as being obvious over Yeh and Waki**

Appellant herein reiterates all of the arguments set forth in the Appeal Brief dated April 12, 2010.

Further, in the Answer, the Office argues that the plural tense of the terms "binders" and "polyurethanes", as recited in Yeh, does not mean that Yeh requires more than one resin. The Office states that references refer to such genera in the plural sense so as to encompass all of the members thereof.

In response thereto, Appellants disagree with the Office that the recitation of "binders" in Yeh should be treated as including all of the species that fall under that genus. For instance, there may be thousands of different polymers that fall under the genus of binders. Knowing that chemistry is an unpredictable art, Appellants do not agree with the notion that *all* of the binders in existence could be used in the ink compositions of Yeh. In fact, since Yeh discloses only polyurethanes as an example of binders that may be incorporated into the composition, it is submitted that one skilled in the art would reasonably conclude that the Yeh binders may only be selected from polyurethanes and/or equivalents thereof.

Even further, Appellants point out that Yeh discloses that binders (in the plural sense) may be incorporated into the composition, but none of the examples set forth in the reference includes binders; let alone a single binder. Without some further guidance from the Yeh reference, Appellants have no reason to believe that Yeh did not mean

binders in the plural sense. For the foregoing reasons, Appellants submit that Yeh does *not* disclose or suggest incorporating only one binder into the composition.

In the Answer, the Office further argues that the fact that Yeh does not specifically exclude water-soluble polyurethanes means that water-soluble polyurethanes are included. However, without some disclosure (e.g., in the written description or in an example) that water-soluble polyurethanes may be used in the Yeh composition, or some teaching that suggests that water-soluble polyurethanes may be used, Appellants submit that a skilled artisan would not conclude that the polyurethanes disclosed in Yeh are in fact water-soluble.

Additionally, in the Answer, the Office argues that Waki provides the rationale to use water-soluble polyurethanes in inkjet inks similar to those of Yeh. Appellants respectfully disagree with the Office, and submit that the composition of Yeh was specifically formulated to have increased optical density (see, e.g., the title of the Yeh reference). Appellants further submit that Waki does not disclose or suggest attempting to increase optical density. In sharp contrast, Waki discloses an aqueous pigment dispersion including a particular combination of polymers (i.e., a water-soluble resin and a resin having a urethane or an amide bond) (see abstract of Waki). Waki further discloses that the polymer combination enables the ink to have a high stability and a high permeability (see, e.g., paragraphs [0010] – [0011]). Appellants submit that a skilled artisan would not assume that the polyurethanes included in the Yeh composition (which is formulated to increase optical density) would be water-soluble based, at least in part, on the Waki disclosure of water-soluble polyurethanes included in a polymer combination of an ink to achieve high stability and high permeability.

For all of the reasons stated above, as well as in the Appeal Brief dated April 12, 2010, Appellants still submit that the combination of Yeh and Waki does *not* render obvious independent claim 1, or those claims depending therefrom.

**B. Rejection of claims 11 and 12 under 35 U.S.C. § 103(a) as being obvious over Yeh, Waki, and Iu**

Appellants herein reiterate all of their arguments set forth in the Appeal Brief dated April 12, 2010.

#### IV. CONCLUSION

The Appellant respectfully submits that claims 1-25 as currently pending fully satisfy the requirements of 35 U.S.C. §§ 102, 103 and 112. Accordingly, Appellant respectfully requests that the Board of Patent Appeals and Interferences find for the Appellant and reverse the rejection of each of Appellant's claims 1-10 and 13-25 under 35 U.S.C. § 103(a) as being unpatentable over Yeh and Waki, and claims 3811 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Yeh, Waki, and Iu. In view of the foregoing, favorable consideration and passage to issue of the present application is respectfully requested.

Respectfully submitted,

DIERKER & ASSOCIATES, P.C.

/Julia Church Dierker/

Julia Church Dierker  
Attorney for Appellants  
Registration No. 33368  
(248) 649-9900, ext. 25  
juliad@troypatent.com

3331 West Big Beaver Rd., Suite 109  
Troy, Michigan 48084-2813

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JCD/AMS